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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/598,871

11/16/2006

Christian Coste

06126

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23338 7590 11/20/2009  
DENNISON, SCHULTZ & MACDONALD  
1727 KING STREET  
SUITE 105  
ALEXANDRIA, VA 22314

EXAMINER

JANCA, ANDREW JOSEPH

ART UNIT

PAPER NUMBER

1797

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/598,871	<b>Applicant(s)</b> COSTE ET AL.	
	<b>Examiner</b> Andrew Janca	<b>Art Unit</b> 1797	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 August 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-31 and 37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-31 and 37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Summary***

1. This is the second non-final rejection of application no. 10/598,871.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 19-31 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claims 19-21, 23-31, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2,264,623 A to Collins in view of JP 63-133959 to Ishii, as evidenced by the World Food Programme's specification for noodles, attached.

References to Ishii in the following will be to the attached English translation.

6. With regard to claim 19, Collins teaches a method for kneading dough containing flour, which is synonymous with soft wheat flour (as contrasted to meal which is made from hard grains) according to the instant specification (1:22-29), comprising kneading the dough in the presence of wetting water (p 7 para 2, p 9 Table) for at least two minutes (claims 2-4) in a kneading machine 1 using at least one mechanical agitator 2 (figure 1), in the presence of an oxygenating compound (p 6 para 4, "This invention can also..."); said kneading taking place under a gaseous phase in the kneading machine of pressure between 1.1-1.6 absolute bars (p 9, Table, 'First stage of mixing').

a. Collins does not teach that the oxygenating compound include ozone, or that the ozone may be added partly dissolved in the wetting water. However, Ishii teaches a method for kneading dough containing soft wheat flour (used in the production of udon noodles, Ishii p 3, as evidenced by the World Food Programme's specifications for noodles, see attached) comprising kneading the dough in the presence of wetting water for at least two minutes (pp 22-23) in a kneading machine using at least one mechanical agitator (p 4) in the presence of ozone (pp 22-23); wherein at least part of the ozone added is supplied in dissolved form in the wetting water added to the flour (pp 22-23).

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- b. Ishii further teaches that the ozone may comprise 1-50 ppm of the ozonated mixing water added to the flour, which comprises part of the total mixing water equal to 33% of the weight of the dough produced (p 6 lines 5-6), or up to 0.0003-0.0017 g per kg of dough produced (p 22). Ishii does not explicitly teach that a ratio of grams to kilograms may be 0.004-0.06: however, Ishii teaches the concentration of ozone as a variable desirable of optimization (pp 22-23). It would have been obvious to one of ordinary skill to have optimized this recognized result-effective variable.
7. With regard to claims 20 and 21, Ishii teaches that the wetting water containing dissolved ozone may be prepared from a vector gas containing ozone, the gas being ozone (pp 22-23): and ozone is a form of oxygen.
8. The additional elements of claims 23 and 24, including that the mixing water may have an absolute pressure of 0.5-2.2 or 1.5-1.7 absolute bars, are taught by Collins, who teaches that the apparatus as a whole including the mixing water may have a pressure of 1.5-3 bars (Collins p 9): the pressure of the gaseous phase in the sealed container is necessarily equal to that of the liquid phase.
9. The additional elements of claims 25-27, including supplying the oxygen-containing gas to a gaseous headspace in the kneading machine, are taught by Collins (p 5 paras 1-2, p 7 paras 1-2, figure 1); and that the oxygenating gas may include ozone supplied with a vector gas that may include air, oxygen, or a mixture thereof, by Ishii (pp 22-23).

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10. The additional element of claim 28, including that the pressure in the gaseous phase is between 1.3-1.5 absolute bars, is taught by Collins (p 9 Table, 'First stage of mixing').

11. The additional elements of claim 29, including that the ozone is added selectively, sequentially, or continuously, are taught by Ishii (p 22: adding a particular concentration of ozone requires selection of the concentration).

12. The additional elements of claim 30, that the kneading may be conventional (p 8 para 3) or intensive (p 9, Table, 'Dough processing') are taught by Collins.

13. The additional element of claim 31, that the kneading is performed solely by the at least one mechanical agitator and not by any agitation of water under high pressure, is taught by Collins (p 7 para 2).

14. The additional elements of claim 37, wherein oxidation of protein fractions occurs during the kneading, the oxidation occurring as a result of the presence of oxidizers consisting of oxygen and said ozone, are taught by Ishii: ozone kills bacteria by oxidizing their tissues and constituent molecules, which include protein (pp 18-19): and ozone being readily decomposed, other forms of oxygen are necessarily present in the mixer.

15. Claims 20-22, 25-27, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2,264,623 A to Collins in view of JP 63-133959 to Ishii as applied to claim 19 above, and further in view of US 2003/0037684 A1 by Yvin et al.

16. With regard to claims 20-22, Ishii teaches that the wetting water is ozonated or hyper-ozonated, and is prepared using an ozone generator (p 22); but does not

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explicitly teach that it may be prepared using a bubbling-type dissolution reactor equipped with a porous device, using pressure dissolution devices of single or multi-stage hydro-ejector type. However, Yvin teach a method of ozonating grain flour where the ozone is supplied by direct gas (paras 0030-0031) or dissolved in wetting water (paras 0055-0057) in the range of 0.5-20 g per kg of grains (para 0021), which given that the flour from the grains comprise about 60% of the final weight of the dough (Collins p 9, Table) will result in a range of 0.3-12 g of ozone per kg of dough; and further teach that the wetting water containing dissolved ozone may be prepared from a vector gas containing ozone, which may be air, oxygen, or a mixture thereof (paras 0055-0058), which is prepared using a bubbling-type dissolution reactor equipped with a porous device (paras 0068-0070), using pressure dissolution devices of single or multi-stage hydro-ejector type 12-16 (para 0070, figure 2). Yvin, Collins, and Ishii are analogous arts, being from the same field of endeavor, the treatment of industrial bread production lines with gaseous additives. Additionally, Yvin and Ishii are from the same problem-solving area, means for adding ozone to water. It would have been obvious to add the ozone in a carrier gas through a bubbling-type dissolution reactor, as do Yvin: the motivation would have been to calibrate its addition (Yvin para 0070).

17. The additional elements of claims 25-27, including supplying the oxygen-containing gas to a gaseous headspace in the kneading machine, are taught by Collins (p 5 paras 1-2, p 7 paras 1-2, figure 1); and that the oxygenating gas may include ozone supplied with a vector gas that may include air, oxygen, or a mixture thereof, by Yvin et al (paras 0055-0058).

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18. The additional elements of claim 29, including that the ozone is added selectively, sequentially, or continuously, are taught by Ishii (p 22: adding a particular concentration of ozone requires selection of the concentration); and Yvin et al (paras 0054ff).

### ***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Janca whose telephone number is (571) 270-5550. The examiner can normally be reached on M-Th 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJJ

/DAVID L. SORKIN/  
Primary Examiner, Art Unit 1797